

ABSTRACT

A method of forming a hybrid mesh representation of an object surface is provided, along with the hybrid mesh representation and data structures corresponding to various polygons in the hybrid mesh representation. The hybrid mesh representation
5 comprises a base mesh and one or more higher level meshes. At least one of the higher level meshes representing a patch is an irregular mesh. The method of forming the hybrid mesh representation comprises the steps of forming a base mesh, and then forming one or more higher level meshes from the base mesh through one or more regular refinement operations in combination with at least one irregular operation.